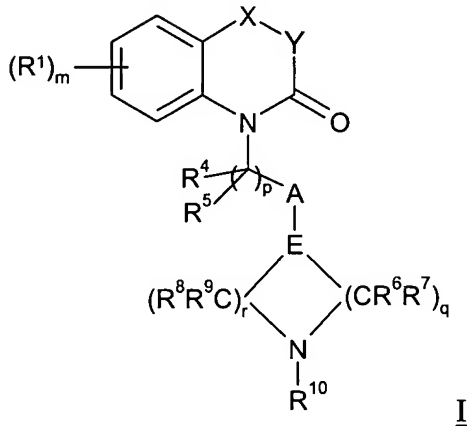
Claim Listing

1. (Currently Amended) A compound of the formula:



I

and pharmaceutically acceptable salts or prodrugs thereof,

wherein:

m is from 0 to 4;

p is from 1 to 3;

q is from 1 to 3;

r is from 1 to 3;

A is **optionally substituted** arylene ~~**or heteroarylene**~~;

E is N ~~**or C**~~;

X is ~~**O, S, or**~~ $-CR^aR^b-$ wherein R^a and R^b each independently is hydrogen or alkyl;

each R^1 independently is halo, alkyl, haloalkyl, ~~**heteroalkyl**~~, hydroxy, nitro, alkoxy, cyano, $-S(O)_sR^c$, $-NR^cR^d$, $-C(=O)-NR^cR^d$, $-SO_2-NR^cR^d-N(R^c-C(=O)-R^d$ or $-C(=O)-R^c$, wherein s is from 0 to 2 and R^c and R^d each independently is hydrogen or alkyl;

Y is $-(CR^2R^3)_n-$ wherein n is 1 or 2 and R^2 and R^3 each independently is hydrogen or alkyl, or X and Y together form **a -CH=CH-** ~~**an alkenylene**~~ group;

R^4, R^5, R^6, R^7, R^8, and R^9 each independently is hydrogen or alkyl; and

R^{10} is hydrogen, alkyl, arylalkyl, **or** aryloxyalkyl, ~~**heteroaryl or heterocyclyl**~~.

2. (Canceled)

3. (Canceled)

4. (Withdrawn) The compound of claim 2, wherein X is O.

5. (Original) The compound of claim 3, wherein Y is $-(CR^2R^3)_n-$ and n is 1.

6. (Original) The compound of claim 3, wherein Y is $-(CR^2R^3)_n-$ and n is 2.

7. (Original) The compound of claim 5, wherein A is optionally substituted phenylene.

8. (Original) The compound of claim 7, wherein R^2, R^3, R^a and R^b are hydrogen.

9. (Original) The compound of claim 7, wherein q is 2 and r is 2.

10. (Original) The compound of claim 7, wherein m is 0.

11. (Original) The compound of claim 7, wherein m is 1 and R^1 is halo or alkoxy.

12. (Currently Amended) The compound of claim 7, wherein A is halophenylene, haloalkylphenylene, alkylphenylene, **cyclopentyloxyphenylene** alkoxyphenylene or alkylenedioxyphenylene.

13. (Original) The compound of claim 7, wherein R^6, R^7, R^8 and R^9 are hydrogen.

14. (Original) The compound of claim 4, wherein Y is $-(CR^2R^3)_n-$ and n is 1.

15. (Original) The compound of claim 4, wherein Y is $-(CR^2R^3)_n-$ and n is 2.

16. (Original) The compound of claim 14, wherein A is optionally substituted phenylene.

17. (Original) The compound of claim 16, wherein R^2, R^3, R^a and R^b are hydrogen.

18. (Original) The compound of claim 16, wherein q is 2 and r is 2.

19. (Original) The compound of claim 16, wherein m is 0.

20. (Original) The compound of claim 16, wherein m is 1 and R^1 is halo or alkoxy.

21. (Currently Amended) The compound of claim 16, wherein A is halophenylene, haloalkylphenylene, alkylphenylene, alkoxyphenylene, **cyclopentyloxyphenylene** or alkylenedioxyphenylene.

22. (Original) The compound of claim 16, wherein R^6, R^7, R^8 and R^9 are hydrogen.

23. (Withdrawn) The compound of claim 5, wherein A is heteroarylene.

24. (Withdrawn) The compound of claim 23, wherein A is indolylene or pyrimidinylene.

25. (Original) The compound of claim 7, wherein R^{10} is hydrogen or alkyl.

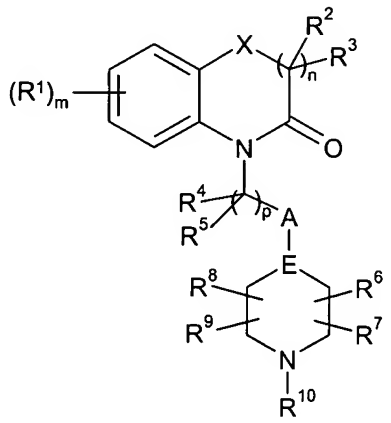
26. (Original) The compound of claim 25, wherein R^{10} is arylalkyl, or aryloxyalkyl.

27. (Original) The compound of claim 26, wherein R^{10} is 2-(4-fluorophenyl)-ethyl or 2-(4-methoxyphenyl)-ethyl.

28. (Withdrawn) The compound of claim 7, wherein R^{10} is heteroaryl or heterocyclyl.

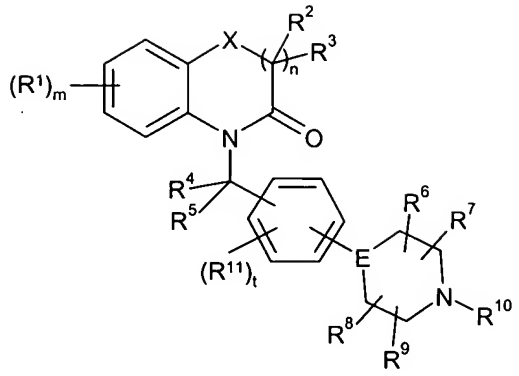
29. (Withdrawn) The compound of claim 28, wherein R^{10} is imidazolinyl such as imidazolin-2-yl.

30. (Original) The compound of claim 1, wherein said compound is of the formula:



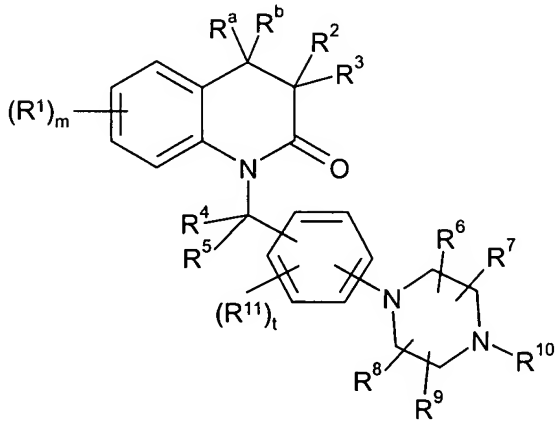
wherein m, n, p, X, A, E, R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} are as defined in claim 1.

31. (Original) The compound of claim 30, wherein said compound is of the formula:



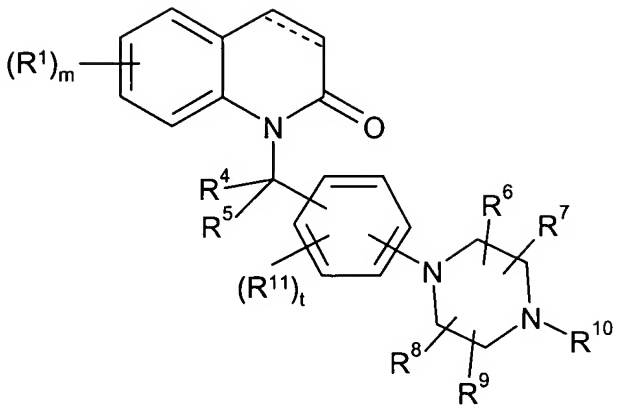
wherein t is from 0 to 4, each R^{11} individually is halo, alkyl, haloalkyl, hydroxy, nitro, cyano or alkoxy, and m, n, X, E, R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} are as defined in claim 30.

32. (Original) The compound of claim 31, wherein said compound is of the formula:



wherein m, t, R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^a and R^b are as defined in claim 31.

33. (Currently Amended) The compound of claim <u>1</u> ~~32~~, wherein said compound is of the formula:



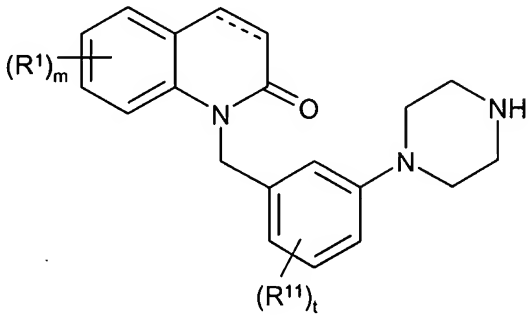
wherein ----- is an optional bond;

t is from 0 to 4;

each R^{11} individually is halo, alkyl, haloalkyl, hydroxy, nitro, cyano or alkoxy; and

m, R^1, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} are as defined in claim 1 ~~and m, t, R^1, R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are as defined in claim 32~~.

34. (Original) The compound of claim 33, wherein said compound is of the formula:



wherein ----- is an optional bond, and m, t, R^1 and R^{11} are as defined in claim 33.

35. (Original) The compound of claim 34, wherein t is 0 or 1 and R^{11} is halo, alkyl, haloalkyl or alkoxy.

36. (Original) The compound of claim 35, wherein R^{11} is chloro, methyl, trifluoromethyl, methoxy or ethoxy.

37. (Original) The compound of claim 34, wherein t is 2 and the R^{11} groups together define an alkylene dioxy radical.

38. (Currently Amended) The compound of claim 1, wherein said compound is selected from the group consisting of:

1-(3-Piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(4-Methoxy-3-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Chloro-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Methoxy-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

6-Chloro-1-(3-chloro-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Cyclopentyloxy-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Hydroxy-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Ethoxy-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-[3-Methoxy-5-(4-methylpiperazin-1-yl)-benzyl]-3,4-dihydro-1*H*-quinolin-2-one;

1-(7-Piperazin-1-yl-2,3-dihydro-benzo[1,4]dioxin-5-ylmethyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Piperazin-1-yl-5-trifuoromethyl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(2-Chloro-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(3-Methyl-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

8-Methoxy-1-(3-Methoxy-5-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

1-(2-Methoxy-3-piperazin-1-yl-benzyl)-3,4-dihydro-1*H*-quinolin-2-one;

4-(3-Chloro-5-piperazin-1-yl-benzyl)-7-methoxy-4*H*-benzo[1,4]oxazin-3-one;

1-(3-Piperazin-1-yl-benzyl)-1,3,4,5-tetrahydrobenzo[b]azepin-2-one;

~~1-(2-Chloro-6-piperazin-1-yl-pyrimidin-4-ylmethyl)-3,4-dihydro-1H-quinolin-2-one;~~

1-(3-Methoxy-5-piperazin-1-yl-benzyl)-1H-quinolin-2-one;

~~1-(5-Piperazin-1-yl-1H-indol-3-ylmethyl)-3,4-dihydro-1H-quinolin-2-one;~~

1-(2-Methoxy-3-piperazin-1-yl-benzyl)-3,4-dihydro-1H-quinolin-2-one;

1-(3-Methoxy-5-{4-[2-(4-methoxy-phenyl)-ethyl]-piperazin-1-yl}benzyl)-1H-quinolin-2-one;

1-(3-{4-[2-(4-Fluorophenyl)-ethyl]-piperazin-1-yl}-5-methoxybenzyl)-1H-quinolin-2-one;

~~1-{3-[4-(4,5-Dihydro-1H-imidazol-2-yl)-piperazin-1-yl]-5-methoxybenzyl}-1H-quinolin-2-one;~~

~~1-[3-Methoxy-5-(4-pyrimidin-2-yl-piperazin-1-yl)-benzyl]-1Hquinolin-2-one;~~

1-(3-{4-[2-(4-Fluoro-phenyl)-ethyl]-piperazin-1-yl}-5-methoxy-benzyl)-8-methoxy-1H-quinolin-2-one;

1-(3-{4-[2-(4-Fluoro-phenoxy)-ethyl]-piperazin-1-yl}-5-methoxy-benzyl)-1H-quinolin-2-one; and

8-Methoxy-1-(3-methoxy-5-{4-[2-(4-methoxy-phenyl)-ethyl]-piperazin-1-yl}-benzyl)-1H-quinolin-2-one.

39. (Original) A pharmaceutical composition comprising an efficacious amount of the compound of claim 1 in admixture with a pharmaceutically acceptable carrier.

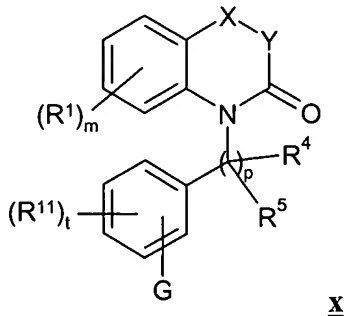
40. (Currently Amended) A method for treating a ~~central nervous system~~ **5-HT6 antagonist-mediated** disease state in a subject, **said disease state selected from the group consisting of Parkinson's disease, Huntington's disease, manic depression, psychoses, Alzheimer's disease and memory disorders,** said method comprising administering to said subject a therapeutically effective amount of a compound of claim 1.

41. (Canceled)

42. (Withdrawn) A method for treating a disorder of the gastrointestinal tract in a subject, said method comprising administering to said subject a therapeutically effective amount of a compound of claim 1.

43. (Currently Amended) A method for preparing a quinolinone or benzoxazinone compound, said method comprising:

reacting a compound of the formula **x**:



x

wherein:

X is ~~**O, S or**~~ $-CR^aR^b-$, wherein R^a and R^b each independently is hydrogen or alkyl;

m is from 1 to 4;

n is 1 or 2;

p is from 0 to 3;

t is from 1 to 4;

G is a leaving group;

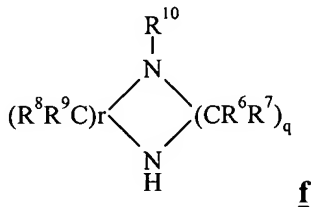
each R^1 independently is halo, alkyl, haloalkyl, ~~**heteroalkyl,**~~ hydroxy, nitro, alkoxy, cyano, $-S(O)_sR^c$, $-NR^cR^d$, $-C(=O)-NR^cR^d$, $-SO_2-NR^cR^d-N(R^c-C(=O)-R^d$ or $-C(=O)-R^c$ where s is from 0 to 2 and R^c and R^d each independently is independently hydrogen or alkyl;

Y is $-(CR^2R^3)_n-$ wherein n is 1 or 2 and R^2 and R^3 each independently is hydrogen or alkyl, or X and Y together form **a -CH=CH-** ~~**an alkenylene**~~ group;

R^4 and R^5, each independently is hydrogen or alkyl; and

each R^{11} individually is halo, alkyl, haloalkyl, hydroxy, nitro, cyano or alkoxy;

with a heterocyclic amine of the formula **f**:



f

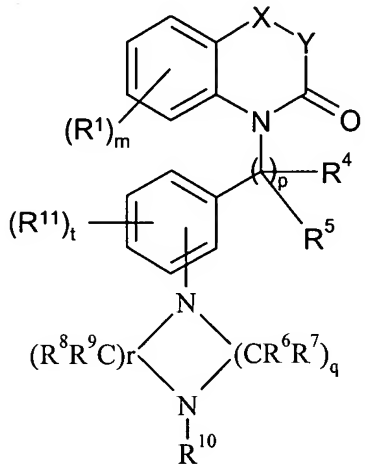
wherein:

q is from 1 to 3;

r is from 1 to 3; and

R^6, R^7, R^8, R^9 and R^{10} each individually is hydrogen or alkyl;

to form a compound of the formula XIII:



XIII.